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The author stresses the importance of understanding student personality factors and how to relate such characteristics to various kinds of academic experiences. The paper presents data, profiles, and tables based on the "Activities Index" and the "College Characteristics Index"—instruments designed to measure personality needs and environmental press (defined by the author as "organizing elements in the psychological environment which are the counterpart of the personality need").

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STUDENT VALUES AND THEIR RELATIONSHIP TO THE COLLEGE ENVIRONMENT

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Values in Higher Education

It is a commonplace for psychologists and educators alike to deplore the gulf between psychological theory and educational practice. From the time that Ebbinghaus first demonstrated a lawfulness even in the learning of nonsense syllables by rote, there has been a firm conviction that experimental psychology would provide the propaedeutic to education. Viewed in this light the current interest in teaching machines is simply the latest revelation to those who have kept faith in the efficacy of technique.

The limitations of technique or method-oriented studies seem so apparent it is a wonder that they should be pursued so relentlessly. People live and learn under the most varied circumstances, sometimes because, but often in spite of, the conditions which confront them. The ideal counterpart of the teaching machine is, no doubt, a learning machine; but it seems improbable that such a depressing outcome is likely to attend our present efforts even in this brave new world. Students will continue to take as much as they are prepared to accept from classroom instruction, regardless of the particular devices employed as the vehicle for their education. As someone once said of learning theorist Hull's own celebrated maze-learners, "In the final analysis, the Harvard rat does as it damn well pleases."

It seems quite unlikely that we can succeed in a quest for the magical procedure which will bring every student to the level of scholastic excellence. It seems even less likely that some secret formula awaits discovery which will stimulate every student to the level of passionate scholarship. What is needed is an understanding of the psychological processes at work in the classroom--the expectations which students bring, and the kind and degree of fulfillment for these expectations which is offered by the instructor. This can lead, perhaps, to a clarification of the relationship between the student's objectives

1. The opportunity to investigate problems discussed in this paper has been greatly facilitated by grants from the United States Air Force, the United States Office of Education, and the College Entrance Examination Board. The preparation of data presented here was under the able direction of Dagney Henderson, assisted by Janice Marsden, Barbara Dimpsey, Harriet Dorn, and Elizabeth Schwenderman.

ED000745

and the school's, and the circumstances under which these can be made to coincide, so that both the instructor and the student can come to share the reciprocal sense of fulfillment and satisfaction represented in the pedagogic ideal.

The search for this ideal communion between teacher and pupil seems to lie unexpressed, but close to the surface, in many recent discussions of American education. Jacob's (1957) striking documentation of the failure of the American college to alter student values is even more noteworthy for the absence of discussion on the role of the schools as an instrument of indoctrination. David Riesman (1959 (b)) has recently commented on the poverty of goals in students and faculties as the mirroring of a similar large-scale malaise in American society. Explicit concern with the techniques for modifying student attitudes and beliefs certainly makes little sense when we are unprepared to specify either the direction or the content for such changed values.

The clue to this omission seems to lie in our misplaced concern with the absence of student motivation as students--with the widespread passivity and indifference to the very issues which we think ought to strike deeply into the inner recesses of every individual--when we should be directing our attention to the substantive values actually held by the students themselves. As Robert Hellman (1959) noted recently, age criticizes youth today not for its rashness but for its premature senility. The absence of intellectual excitement among undergraduate students is indeed evident, but this is more than a matter of ineffectual techniques in the classroom. The very "privatism" to which some observers refer is a symptom of the gulf between the learner and the learned, rather than of deficiencies in either of them.

A number of factors seem to have contributed to this classroom distance. On the one hand a large proportion of the university faculty is becoming more and more inaccessible to the undergraduate student. As the financial contribution of the professional scientist to higher education increases--one observer estimates it to constitute approximately one-fourth of the entire budget for higher education in this country (Glass, 1960)--his participation in the college classroom decreases. He is actively encouraged to develop his skills as a research administrator with every inducement known in the academic marketplace (Caplow and McGee, 1958). The major teaching experience of an increasing number of university scientists is being limited to their days as graduate assistants and instructors.

One of the consequences of this trend towards professionalization is that, as Riesman has said (1959 (a)), the life of the businessman and the life of the professor have become less and less distinct. This gradual disengagement of one sector of the faculty from the classroom and its values has been matched in their own way by the growing disenchantment of the students. Ever greater numbers are being admitted to college today who view education in a far different light from their

ED000745

predecessors of the pre-war years and earlier. The strident voice of Jencks (1960), raised in vigorous undergraduate protest against the bogus academic culture he finds today at Harvard, arouses more wistful nostalgia in the professors he castigates than it does righteous indignation among the fellow students for whom he would speak. The legend of Veblen's rooms, ancestral home of a generation of anti-Babbitt naturalists seeking life without Father, evokes no response from many of these young people. College has come to represent the necessary, but undesirable, continuation of secondary schooling--a more specialized preparation for the job in which one will find personal satisfaction, security, and prestige. Under these circumstances the college can never become an end in itself but only a means which must be borne as swiftly and painlessly as possible. Small wonder, then, that the teacher is appalled by the lack of intellectual curiosity and probing analysis which he associates with his own educational experiences. He is even denied a response based on the desire to demonstrate competence in the mastery of technique or subject matter, since so many of his students seem convinced that the benefits of college education lie in residence rather than in reasoning. Today's student comes prepared to submit to irrelevance and boredom in the classroom; he is only rarely entertained, let alone beguiled.

Non-Directive Teaching in the College Classroom

The introduction of Rogerian non-directive counseling in the 1940's (Rogers, 1942) laid the groundwork for a new orientation towards college teaching which proved highly attractive in the post-war years. The search for some way of closing the gap between students and instructor in the classroom seemed to have found an answer supported by psychological theory, educational practice, and ethical belief. The essential characteristic of non-directive therapy lies in the forthright adaptation of technique to purpose, that purpose being to facilitate the client's self-cure. The change in terminology introduced by Rogers, from patient to client, is in itself a reflection of the final breech with prior traditions and ways of thinking derived from organic medicine: patients suffer from illnesses which can be relieved by the art of the healer; clients enlist the services of a professional to aid them in achieving a purpose they have determined for themselves.

Aspects of this position were already implicit to a degree in earlier forms of psychotherapy. The now classic study of Lewin, Lippitt and White (1939) demonstrating that acts of student aggression against one another are most severe under rigid authoritarian leadership and absent in a democratic classroom atmosphere, lent further support to the new position. But perhaps the most important factor of all was the post-war reaction against manipulation and coercion then making itself felt in the permissive doctrines of preschool pediatrics.

In some hands, the student-centered classroom introduced an exciting forum for the mutual education of teacher and student alike, contributing to the clarification and reduction of the cultural distance between them

(cf. Riesman, 1959 (a); Jencks, 1960). A recent analysis (Stern, 1960) of seventeen studies of student-centered instruction disclosed eight reporting quantitative evidence of favorable attitude change associated with participation in a non-directive class, none involving negative attitude change. But the evidence for the most part suggests that the procedure is ineffectual as a technique for teaching substantive material. Only one study could be found which actually demonstrated that student-centered instruction was associated with a greater mastery of subject matter, and that was in a psychology class (Faw, 1949). Three investigators report significantly less information acquired by students in non-directive classes than in more autocratic drill sections (Asch, 1951; Brookover, 1943; Geutskow, Kelley and McKeachie, 1954).

More to the point, however, is the fact that eleven studies reporting student reactions to student-versus-instructor-centered techniques are divided almost equally between favorable, unfavorable, and mixed responses. This may be due to some extent to the quality of student-centered instruction encountered by these students. In its heyday non-directivism in the classroom became something of a cult of leaderless listening, a defense for those whose feelings of personal inadequacy as teachers found refuge in the relinquishing of control rather than in its arbitrary exercise. But studies by Wispe (1951) and Patton (1955) both demonstrated that student attitudes toward particular classroom atmospheres are highly selective, student-centered instruction being preferred by students who reject traditional sources of authority, have strong needs for demonstrating their personal independence, and are further characterized by a high drive for academic achievement.

This particular combination of characteristics--rebelliousness and intellectuality--suggests that we may be dealing with something broader and more complex than a mere preference or distaste for group discussion. That this was indeed the case was demonstrated in a series of studies which appeared subsequently.

The Antidemocratic Student in Liberal Education

Ten years ago the American Council on Education sponsored an inquiry into general education under the direction of Dressel and Mayhew (1954). One of the areas of concern in this investigation was the measurement of objectives associated with emotional and social adjustment. The committee of counselors, professional evaluators, and human relations teachers charged with this area promptly decided that the concept of personal adjustment was too relative for its measurement to be standardized by objective questionnaire. Thrilled by our forthrightness (and startled by our unanimity) the committee turned eagerly to the definition of attitudes, values, and personality characteristics to be regarded as a desirable outcome of general education.

Many months later a more chastened group concluded itself to be more united in our dislikes than we were in our preferences, and the decision to measure virtue by the absence of vice was born. The Inventory of Beliefs (Dressel and Mayhew, 1954) was the consequence, a questionnaire designed to appraise the degree of acceptance of a collection of essentially antidemocratic attitudes and values opposed to the objectives of general education. Related generically to the California F-scale (Adorno et al, 1950), the Inventory was not conceived as a broad-spectrum value measure but as an index for the identification of a personality syndrome composed of recognizable attitudes, values, opinions, needs, and psychological mechanisms as well as beliefs. For the purpose of our present discussion, however, it will suffice for it to be identified as a collection of statements reflecting a pattern of small-town conservatism characterized by intense nationalism, fundamentalism, and racism.

The first surveys with this instrument revealed a general reduction in such beliefs during the freshman year in most of the participating colleges, but the differences between schools were so great that the scores for entrants at some were far higher than the terminal scores of students elsewhere. In two elite colleges low-scoring stereopathic students, so-called for their endorsement of the stereotyped clichés, banalities, and platitudes incorporated in the Inventory, were found to be significantly less interested and less able in the social sciences and the humanities than the high scorers and more likely to have withdrawn from school by the end of the first year.

Although the endorsement of the beliefs and opinions contained in the Inventory was considered to be evidence of identification with a particular value system--an assumption seemingly supported by the selective rejection of art, music, and social studies--it may also signify no more than an indiscriminate tendency to endorse any statement of belief. An even more serious question was raised regarding the interpretation to be placed on the low scorers who rejected the stereopathic beliefs. It seemed unreasonable to assume that this rejection implied endorsement of the antithesis of these beliefs, when it was also the only response available to those prepared to reject both sides of the ideological coin.

Out of these considerations a modification known as Form T was developed concomitantly at Chicago which incorporated both the original statements in the Inventory and their ideological inversions. The comparison of scores on the two sets of items makes it possible to identify four groups of students:

stereopaths, who explicitly endorse statements reflecting nativist-fundamentalist conservatism, and reject the beliefs held by

anti-stereopaths, who hold equally firm convictions with respect

to beliefs which may be characterized as a more urban, internationally-oriented relativistic liberalism, and reject the original stereopathic items,

irrationals, who indiscriminately accept both types of items despite their ideological incompatibility, and

rationals, who reject the values implied by either set of items, presumably out of regard for their illogical extremism.

These changes were intended to clarify the stereopathy dimension by eliminating respondents whose general tendency to agree (the irrationals), or to disagree (the rationals) had caused them to be confounded with the extreme scorers at either end of the earlier Inventory of Beliefs.[2] Students identified as anti-stereopaths on this revised instrument were found to share characteristics with the Wispe (1951) and Patton (1955) undergraduates mentioned previously who had indicated a preference for nondirective teaching methods. Gladstein (1957) devised a multiple-choice Study Activities Questionnaire based on expected differences between anti-stereopaths, stereopaths, and rationals, and administered it to 104 representatives of each type at Chicago and Syracuse. The anti-stereopaths' item responses indicated that they enjoyed cooperative study because they liked other viewpoints, liked discussions, and liked being with other people. They also enjoyed having the class discuss side issues, and took notes of stimulating and challenging ideas which they intended to explore later. The stereopaths, on the other hand, found theoretical discussions in class particularly frustrating and preferred a straightforward exposition by the instructor to any other form of classroom activity. They disliked studying with others because this always meant a bull session in which nothing definite was ever settled. The differences in study activity preferences between the two groups was highly significant and not related to the school they were attending.

There is a good deal more known about these two kinds of students at both institutions. Elsewhere (Stern, Stein and Bloom, 1956; Stern, 1960) we learn that the anti-stereopathic undergraduates tend to be first generation Americans from professional homes in large cities. Unlike their parents, who are most often Jewish in faith and Democrat in hope,

2. Form T also has limitations insofar as it confounds (1) qualified and unqualified generalizations, (2) coercive and non-coercive types of action, and (3) violent with non-violent modes of expression. A new instrument to be known as the S-A Scale (stereopathy-acquiescence) has been devised which attempts to take these factors into account. It also contains a parallel set of non-ideological items. Sponsored by the Social Sciences Research Council Committee on Personality Development in Youth, it has been prepared by a sub-committee consisting of Richard Christie, Hugh Lane, Nevitt Sanford, and Harold Webster, under the chairmanship of George Stern and assisted by Sally Donovan and Joyce Freeling.

they declare themselves to be independents with neither church nor party affiliations. These students were at the upper limit of their class range in scholastic aptitude, had broad cultural and intellectual interests, and did exceptionally well in the social sciences and humanities where they expected to develop their ultimate professional career. Nevertheless their instructors found them difficult to handle due to their argumentative manner, rebelliousness, and impulsiveness. A Citizenship instructor at Syracuse described a special class composed exclusively of anti-stereopaths to which he had been assigned without knowledge as having a bargaining, critical attitude, with many questions about the administration of the course and its purposes. In time, however, he came to delight in their intellectual independence despite their proneness to haggling. These are the people, he says, who "would fight about how to run the world while other people run it." (Stern, in press)

The undergraduate stereopaths tend to be the obverse on almost every one of these characteristics. Their families have been in this country for several generations, are of relatively low socio-economic status and come from smaller towns and rural areas. They share their parents' religious convictions which are most often Catholic or fundamentalist or evangelical Protestantism, and their political affiliations which are strongly Republican. On a scale indicating degree of acceptance of people of other nationalities they were the only group of students in favor of excluding some people from American citizenship. Although average in scholastic aptitude, they did unusually poorly in the Social Sciences and Humanities and expressed a strong dislike for both of these areas. Their academic goals are explicitly vocational and oriented towards business, law, medicine or engineering. Obsessive in their concern with detail, they prefer studying at the same place and time each day, in a neat and orderly room, in accordance with a rigid study schedule. They decry the lack of professional courses in general education programs, and have also objected to the educational inadequacies of instructors who tolerate smoking in the classrooms, don't take attendance, and expect students to answer their own questions.

It is somewhat ironic that non-directive classroom techniques should be so successful with the anti-stereopathic students who are least in need of additional motivation, in contrast with the stereopaths, who are only further alienated by such procedures. Dressel and Mayhew (1958) found that a section of anti-stereopaths taught Social Science by non-directive methods performed significantly better than the rest of the student body enrolled in this course. Conversely, the same methods applied in a section of stereopaths produced such violent reactions by the fifth week that the instructor felt impelled to shift to a highly rigid lecture method.[3]

The same Citizenship instructor quoted previously described a class of stereopaths as lacking in curiosity and initiative, difficult to get into discussion, and providing a constant temptation to be lectured.

3. Comment in personal communication.

Ultimately, however, this instructor succeeded in arousing an active response from these students and bringing their achievement on the common final objective examination to the same level as the noramlly superior anti-stereopaths, although stereopaths assigned randomly to other conventional sections of the course did more poorly than their classmates in those sections. His success in this regard seems attributable to several techniques described in the daily diary he maintained for the experimental sections. These include the continued use of direct questions, a refusal to lecture, and the encouragement and acceptance of any student response. But perhaps the most effective of his devices was his vigorous defense of absurd issues, as in the case of a discussion about women in politics in which he took the position that women were useless, refused to call on any of them, accepted and agreed with all male opinions, and added to the slurs until "every girl in the class was ready to tear the plaster off the wall." On other occasions, he took the position that voting was useless, favored slavery, and defended totalitarianism. From these impasses, he said, the stereopaths "finally broke down and simply asked one interpretative question after another about the course," the barrier between students and instructor having finally begun to dissolve (Stern, in press).

Environments for Learning

The significance of this study lies in the fact that the pedagogical techniques which in the end proved effective with these students cannot be described as either directive or non-directive. Left to their own devices in an area for which they are ill-prepared and normally antagonistic, these students would have perpetuated their deficiencies. Assigned en bloc to an instructor prepared to cope with their peculiarities, they enjoyed a profitable learning experience in a classroom atmosphere which provided stimuli specifically appropriate for them. But it is significant that the techniques employed in this case have neither name nor classification. We have no formal system of pedagogical theory, and know almost nothing about the relationships between particular procedures and their educational consequences.

The implication is clear. We need to know more about personal characteristics of students that are of significance for learning, and we need to know more about the various kinds of educational experiences which influence students' growth and development. The potential contribution of the social scientist to research in higher education suggested by Newcomb's (1943) monumental pioneering study of the impact of college on student values is finding a rich measure of fulfillment today. Significant studies are now in process in a number of institutions, including Amherst, Cornell, Harvard, Michigan, MIT, Syracuse, Vassar, Wellesley, and Yale. A synopsis of several of these current studies has been prepared by Bidwell (1960). Barton (1959) has described and analyzed many of the instruments being used in these studies, providing a very useful commentary on problems involved in studying the effects of college education.

These effects have generally been studied in terms of changes in test scores over a period of time for an entire class or a sample of one. There are a few reports of changes taking place for more homogeneous groups of students being trained in some special field, but none which compare people in several such fields systematically on comparable dimensions. The remainder of this paper will be given over to such an analysis, and to the measurement of factors in the college environment which may be associated with such changes.

Measuring Devices

The data to be reported are based on the Activities Index[4] and the College Characteristics Index[5,6] (Stern, 1958; Pace and Stern, 1958(b)): conceptually parallel instruments designed to measure the personality needs and environmental press concepts introduced by Murray (1938). Needs refer to organizational tendencies which appear to give unity and direction to personality. There are other terms which have been applied to such tendencies; our interest here is in classifying the unifying themes which may be inferred from observations of a person's actions. Consider, as an example, an isolated action, such as seeing someone pause to look at himself as he passes a mirror. This may have any one of several meanings. But when we also learn that this person spends a great deal of time in personal grooming, tries to make his handwriting decorative or unusual, and likes to think about ways of making his name sound more striking or different, this begins to suggest to us that a strong narcissistic tendency unifies these diverse acts.

Press refers to organizing elements in the psychological environment which are the counterpart of the personality need. Thus, when we are told that there are frequent receptions, teas, or formal dances at a college, this may signify many things, but when we also observe that poise and sophistication are highly respected by both students and faculty, there are mirrors in many of the public rooms and halls, and that there are definite times each week when dining is made a gracious social event, we may feel somewhat justified in assuming that a narcissistic preoccupation with one's person is greatly encouraged on this campus.

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4. Devised initially in collaboration with Benjamin S. Bloom, Morris I. Stein, Hugh Lane, Mary McCord, Sharon Goldberg, Paul Baer, James Sachs, Dorothy Whitman, and James Abegglen, for use in studies of student personality assessment at Chicago (Stern, Stein and Bloom, 1956). Subsequent revisions have been contributed to by Charles Van Buskirk, Fred Carleton, Walter Stellwagen, John Scanlon, Louis DiAngelo, and others.
5. Developed in collaboration with C. Robert Pace, with the assistance of Anne McFee, Dagny Henderson, Barnett Denton, Sally Donovan, Harriett Dorn, Eugene Farber, and others.
6. A form suitable for use in secondary school environments, the High School Characteristics Index, has recently been prepared with the aid of John Dopyera, Vernon L. Woolston, James Lyons, and Eva K. Woolfolk.

The present forms of the two indexes consist of 300 items of these kinds distributed among 30 scales of ten items each.[7] The scales are systematically related to one another in a manner reflected in the charts shown in Figure 1. Each wedge in the circle corresponds to a scale. Those close together are highly correlated; at 90° apart the relationship approaches zero, and becomes negative at 180°. Scale scores are shown in each wedge from zero at the center to a maximum of ten at the periphery. The pattern of scales in each sub-area of the circle suggests an interesting internal structure consisting of peculiarly intrapersonal and depressed activities at the lower left of the circle which become increasingly sociable towards the top and increasingly outgoing and assertive towards the lower right. Refactoring these clusters has yielded two independent dimensions for the circle, one of which can be represented by a diagonal from upper right to lower left which will be referred to as dealing with impulse expression and its control. The second dimension is on the diagonal from upper left to lower right and may be called dependency needs vs. autonomy. The grid at the bottom of the chart summarizes scores on a group of scales which yield a third factor independent of the two in the circle, dealing with intellectual needs.

The two profiles shown in Figure 1 were both obtained from freshmen medical students. The one on the left suggests a distant, self-assertive individual with fantasies of personal achievement and intellectual precocity. The faculty noted independently that this student was antagonistic, individualistic and dreamlike, with a suggested capacity for work which he never fulfilled. The profile to the right is at the opposite extreme in suggesting withdrawal, depressed affect, lowered self-esteem, minimal drive level, and modest intellectual characteristics. This student was an early withdrawal who complained of the excessive work.

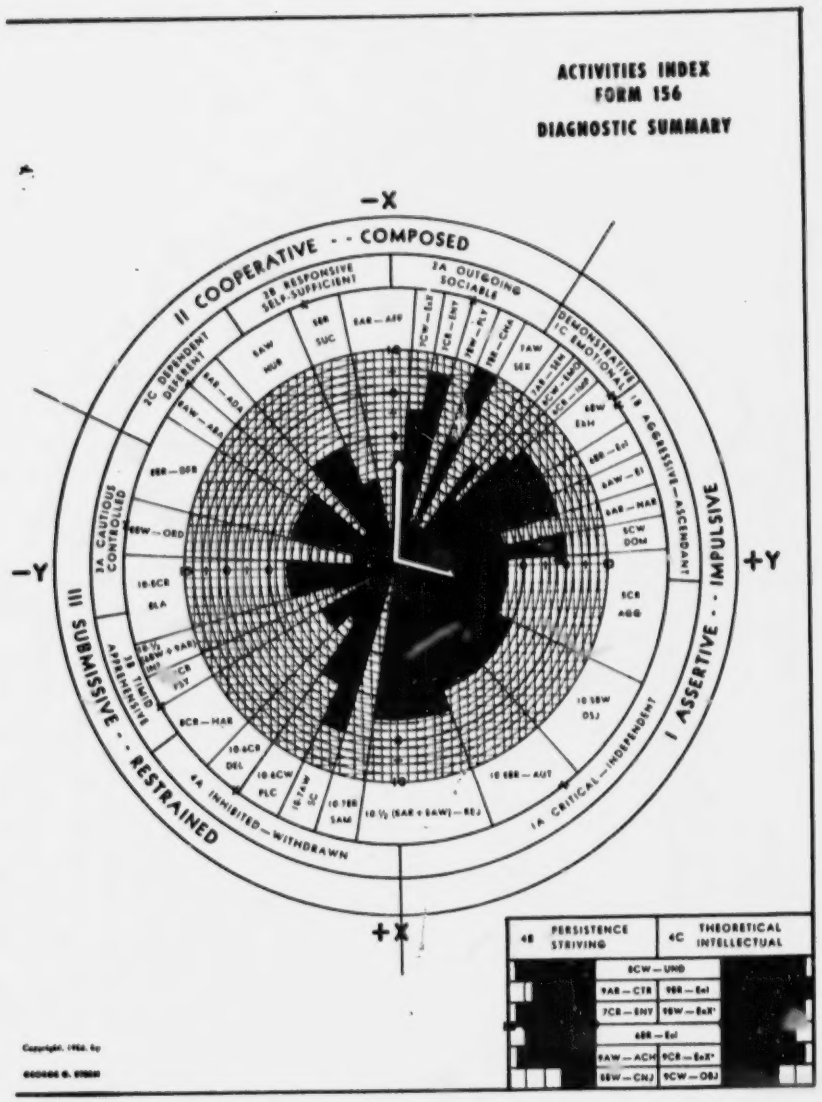
Although the scoring and presentation of Index results are seemingly complex, the machine shown in Plate 1 has been designed to accept test response data from an IBM Test Scoring Machine and present the processed output in the form of punched IBM cards and 8½x11 profile graphs, such as those of Figure 1. It is also capable of assembling multiple item scale responses from other tests and transposing them to punched cards or visual graphs.

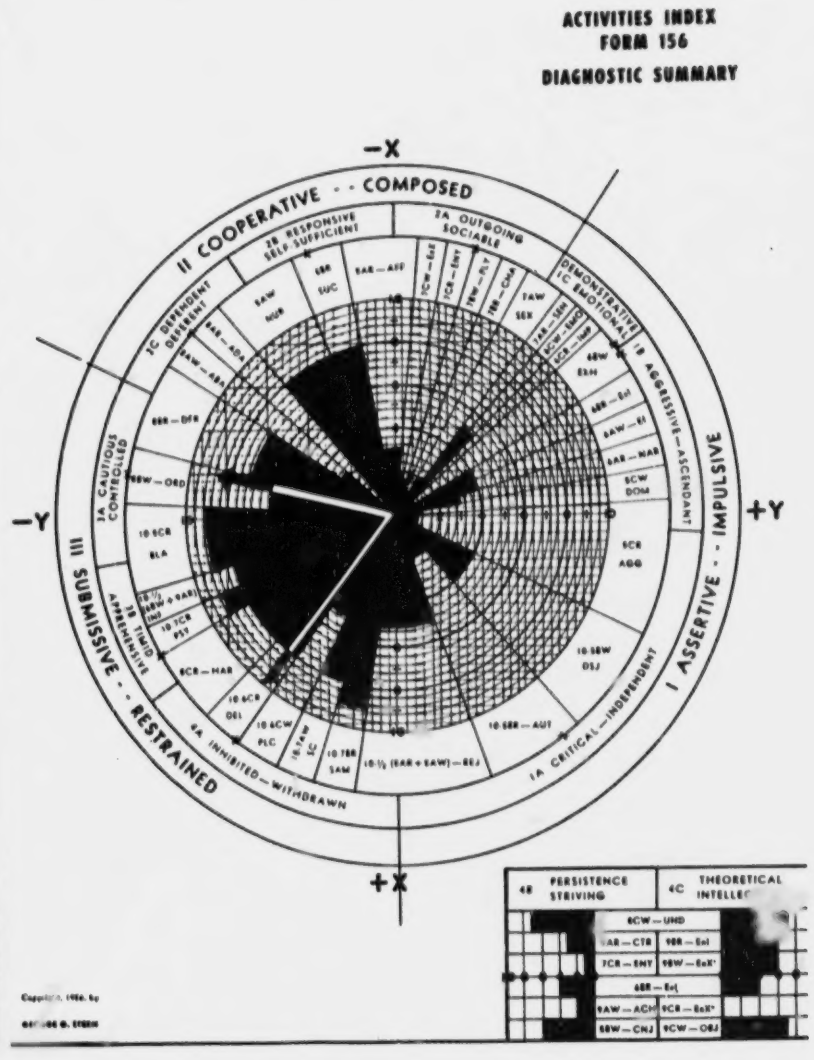
Personality Needs Related to Professional Training

Table 1 lists Activities Index needs scale means, grouped under the three general factors, for students and professionals in four fields: business, education, engineering, and medicine. The students are

7. The scales have an average reliability of .67 which may be considered reasonably adequate for scales of such short length, and a high degree of internal consistency as reflected in an average item discrimination index of .54.

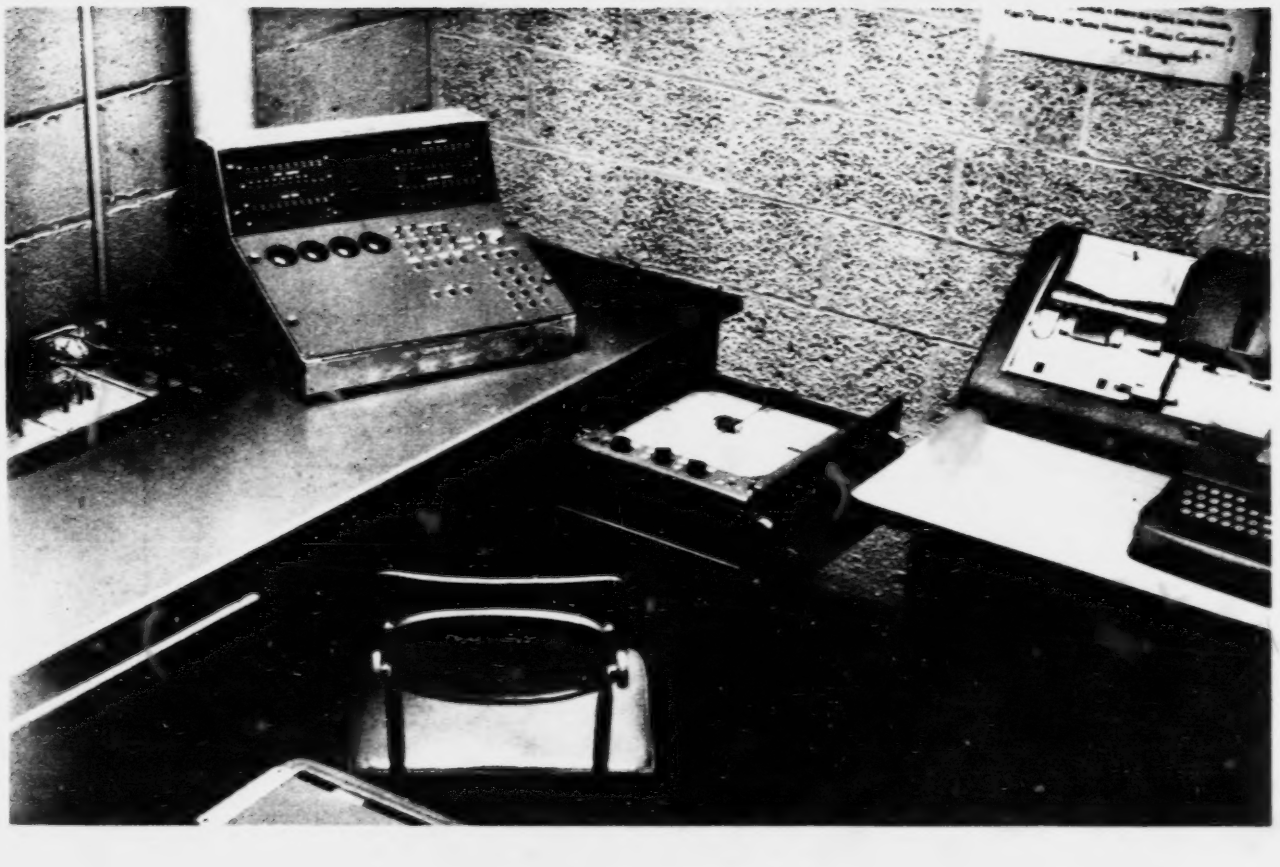
Figure 1





Profiles of two medical school freshmen. Reproduced by permission of Association of American Medical Colleges from G. G. Stern and J. C. Scanlon, "Pediatric Lions and Gynecological Lambs," in H. H. Gee and R. J. Glaser (Eds.), "The Ecology of the Medical Student," J. Med. Educ., 1958, 33, Part 2, 12-18.

Plate 1



Electronic equipment linking IBM test scoring unit and key punch in a processing chain for scoring, computing, graphic profiling, and card punching of multivariate test data.

undergraduates in varying years in each case except medicine where the subjects were in their fourth year of medical school. The professionals consisted of samples of equipment salesmen, public school teachers, industrial research chemists, and general practitioners. The high values on each line have been indicated thus (~~~~); low values are underlined. For example, need achievement, one of the intellectual needs, is significantly higher for the industrial research chemists than for most other groups. The teachers, on the other hand, have the lowest score on this variable but are probably not significantly lower than any of the others except the industrial chemists.

The specific scales contributing to differentiation between the eight groups are summarized for convenience by name in Table 2.

As Siegelman (1957) had found previously for samples of army officers, theology students, and graduate students in chemistry, the test responses identify a number of personality characteristics peculiar to each of the vocational groups studied here. An analysis of variance of the three major dimensions of Tables 1 and 2 indicates that the students and the professionals in the four fields differ significantly among themselves on each of the three dimensions. These differences exist only between fields; students as a group do not appear to differ from professionals in general, despite the gross differences in age, with the possible exception of impulse expression. In this area, the students have higher scores on the average than the professionals, each individual group of students showing a higher degree of impulse expression than the professional counterparts in their own field, except for engineering where students and professionals are alike. There is a similar interaction between students and professionals in their intellectual needs, although this time it is the professionals who have the higher score in each field, except education where the teachers show weaker intellectual needs than the students matched with them.

The differences between fields summarized in Table 2 are somewhat more extensive among the practicing professionals than among the students, suggesting a greater degree of role differentiation among the older, more experienced group. Furthermore, the characteristics of students and professionals do not appear to be a simple function of one another. Although the differences between them reflect the influences of self-selection to the field and the impact of school and experience to unknown degrees, they suggest a process of maturation and development rather than one of selective narrowing or conformity.

The foregoing analysis is limited by the diversity of samples employed; the professionals from business and engineering, for example, can hardly be considered representative of these broad fields. A better illustration of the effects of training on the processes being measured here is provided by data from two successive classes of medical students tested as freshmen and again as seniors. The two classes do not differ from one another either as freshmen or as seniors, but they both show very considerable changes over the four-year period. Table 3 illustrates these changes for the combined classes, revealing a broadening

Table 1

Activities Index Scale Means* for Eight Groups of Subjects at Two Levels of Experience in Four Professional Fields

Dimension	Need Scales	Students					Professionals					Combined
		Bus	Educ	Eng	Med	Total	Bus	Educ	Eng	Med	Total	Total
Intellectual Needs	Achievement	5.50	5.36	5.93	5.47	5.56	6.79	4.93	**7.16**	5.97	6.21	5.88
	Conjunctivity-Disjunctivity	6.19	5.40	6.10	*4.53*	5.56	**7.06**	5.57	5.81	5.75	6.05	5.80
	Counteraction-Infavoidance	6.30	5.95	6.73	5.76	6.18	**7.67**	5.49	5.94	6.50	6.40	6.29
	Ego Achievement	4.81	4.90	*3.37*	5.47	4.64	4.67	3.81	4.76	4.81	4.51	4.57
	Energy-Passivity	6.65	6.25	6.66	7.03	6.65	7.38	*5.57*	6.63	6.76	6.58	6.62
	Humanism	*3.94*	5.89	*3.81*	6.17	4.95	4.32	5.34	*6.38*	6.20	5.56	5.25
	Objectivity	6.72	*1.92*	**7.32**	**7.64**	5.90	6.44	*2.18*	**7.56**	**7.64**	5.96	5.93
	Reflectiveness	5.97	6.62	5.26	6.59	6.11	4.85	5.58	6.31	6.21	5.74	5.92
	Scientism	*4.22*	*4.54*	**7.32**	6.23	5.58	5.53	*3.31*	*8.88*	**7.02**	6.18	5.88
	Understanding	5.27	6.04	5.66	6.20	5.79	5.14	4.99	**9.32**	6.45	6.48	6.13
Dependency Needs	Abasement	3.99	3.87	3.29	2.88	3.51	3.79	3.60	2.66	3.25	3.32	3.42
	Adaptiveness	3.74	*5.95*	4.34	3.91	4.48	4.82	*6.20*	*3.42*	4.08	4.63	4.56
	Affilitation-Rej	*8.20*	7.53	6.71	7.47	7.48	7.23	*5.50*	6.00	6.61	6.33	6.91
	Blamavoidance-Agg	6.70	6.92	6.83	6.50	6.74	7.94	7.95	6.31	7.12	7.33	7.04
	Conjunctivity-Disjunctivity	6.19	5.40	6.10	*4.53*	5.56	**7.06**	5.57	5.81	5.75	6.05	5.80
	Deference	6.54	6.87	6.61	5.73	6.44	7.44	6.82	6.43	6.80	6.87	6.66
	Nurturance-Rej.	6.73	7.87	6.47	7.85	7.23	7.94	*5.94*	6.58	7.85	7.08	7.16
	Order	5.77	5.38	4.71	*3.32*	4.80	*6.05*	5.61	4.26	*3.52*	4.86	4.83
	Succorance-Autonomy	6.18	5.99	5.90	6.00	6.02	7.26	6.44	6.56	6.62	6.72	6.37

*Boldface (**xxx**) and italicized (*xxx*) entries indicate means differing within groups on each row enough to be estimated as statistically significant in the region of the .01 level or beyond.

Table 1 (cont.)

Activities Index Scale Means* for Eight Groups of Subjects
at Two Levels of Experience in Four Professional Fields

Dimension	Need Scales	Students					Professionals					Combined Total
		Bus	Educ	Eng	Med	Total	Bus	Educ	Eng	Med	Total	
Impulse Expression	Aggression-Blamavoidance	3.30	3.08	3.17	3.50	3.26	2.06	2.05	3.69	2.88	2.67	2.97
	Change Sameness	6.97	2.97	6.68	7.32	5.98	6.50	6.02	6.14	6.32	6.24	6.11
	Dominance	5.34	3.94	4.20	4.38	4.46	4.44	3.14	4.46	3.86	3.98	4.22
	Ego Achievement	4.81	4.90	3.37	5.47	4.64	4.67	3.81	4.76	4.81	4.51	4.57
	Emotionality-Placidity	3.41	4.13	2.51	3.47	3.38	2.79	3.23	2.49	3.04	2.89	3.13
	Energy-Passivity	6.65	6.25	6.66	7.03	6.65	7.38	5.57	6.63	6.76	6.58	6.62
	Exhibitionism	4.52	3.64	3.81	5.23	4.30	3.88	2.52	4.38	4.14	3.73	4.01
	Infav. Fantasied Achievement	6.76	5.72	5.93	5.94	6.09	6.44	4.78	6.26	6.07	5.89	5.99
	Impulsion-Delib.	3.68	4.33	3.37	4.29	3.92	3.50	3.68	3.27	3.93	3.60	3.76
	Narcissism	5.98	5.28	4.71	5.32	5.32	4.85	4.52	5.24	4.72	4.83	5.07
	Play	5.45	5.26	4.56	5.50	5.19	3.91	4.47	4.48	3.86	4.18	4.68
	Pragmatism	6.81	7.30	7.66	6.76	7.13	8.03	6.17	7.43	6.82	7.11	7.12
	Risk-Harmavoidance	4.84	4.54	5.19	4.94	4.88	3.59	3.68	4.49	4.40	4.04	4.46
	Sentience	4.01	4.33	3.59	4.88	4.20	2.32	2.79	4.01	3.42	3.14	3.67
	Sex-Prudishness	4.70	3.77	4.17	5.32	4.49	2.85	2.56	4.58	4.38	3.59	4.04

*Boldface (wavy) and italicized (_____) indicate means differing within groups on each row enough to be estimated as statistically significant in the region of the .01 level or beyond.

Table 2

Summary of Activities Index Scales Contributing to Differentiation Between Eight Groups of Subjects at Two Levels of Experience in Four Professional Fields

	Students				Professionals			
Dimension	Business	Education	Engineering	Medicine	Business	Education	Engineering	Medicine
Intellectual Needs	Humanism - Scientism -	Objectivity- Scientism -	Ego Achievement - Humanism - Objectivity + Scientism +	Conjunctivity- Objectivity +	Conjunctivity+ Counteraction+ Understanding-	Energy- Objectivity- Scientism- Understanding-	Achievement + Humanism+ Objectivity+ Scientism+ Understanding+	Objectivity+ Scientism+
Dependency Needs	Affiliation+	Adaptiveness+		Conjunctivity- Order-	Conjunctivity+ Order+	Adaptiveness+ Affiliation- Nurturance-	Adaptiveness-	Order-
Impulse Expression	Dominance+	Change- Emotionality+	Ego Achievement-	Change+ Exhibitionism+ Sentience+ Sex+	Sentience- Sex-	Dominance- Energy- Exhibitionism- Fantasied Achievement- Sex-		

Table 3

Activities Index Scale Means for Two Combined Medical School Classes As Freshmen and as Seniors (N=118)

Dimension	Need Scales	Freshmen $\bar{x}$	Freshmen σ	Seniors $\bar{x}$	Seniors σ	t	p	D*
Intellectual Needs	Achievement	6.51	2.21	5.76	2.40	2.50	<.05	-
	Conjunctivity-Disjunctivity	6.05	1.63	6.22	2.17	0.58	n.s.	
	Counteraction-Infavoidance	6.67	2.01	6.18	2.43	1.68	n.s.	
	Ego Achievement	6.08	2.18	6.02	2.90	0.18	n.s.	
	Energy-Passivity	7.30	1.51	7.09	1.66	1.00	n.s.	
	Humanism	6.26	2.51	7.04	2.63	2.60	<.05	*
	Objectivity	7.56	2.07	9.23	1.40	7.73	<.001	+
	Reflectiveness	6.78	1.96	6.94	2.20	0.59	n.s.	
	Scientism	7.72	1.98	6.63	2.75	3.52	.001	-
	Understanding	6.59	2.20	7.64	2.12	3.72	.001	+
Dependency Needs	Abasement	3.25	1.48	3.40	1.85	0.68	n.s.	
	Adaptiveness	5.42	2.37	5.31	2.33	0.37	n.s.	
	Affiliation-Rejection	7.58	1.95	7.01	2.39	2.01	<.05	-
	Blameavoidance-Agression	6.92	2.03	4.87	2.52	6.85	<.001	-
	Conjunctivity-Disjunctivity	6.05	1.63	6.22	2.17	0.68	n.s.	
	Deference	6.78	1.58	5.65	2.06	4.71	<.001	-
	Nurturance-Rejection	8.25	1.25	6.85	2.14	6.09	<.001	-
	Order	4.69	2.31	3.97	3.10	2.02	<.05	-
	Succorance-Autonomy	6.19	1.75	6.08	2.21	0.42	n.s.	

*Significant increases in the Senior year are indicated by a plus (+) sign, loses by a minus (-).

Table 3 (cont.)

Activities Index Scale Means for Two Combined Medical School Classes As Freshmen and as Seniors (N=118)

Dimension	Need Scales	Freshmen $\bar{x}$	Freshmen σ	Seniors $\bar{x}$	Seniors σ	t	p	D*
Impulse Expression	Aggression-Blameavoidance	3.08	2.03	5.13	2.52	6.85	<.001	+
	Change-Sameness	7.05	1.69	4.75	2.19	7.14	<.001	-
	Dominance	4.86	2.00	6.90	2.34	7.18	<.001	+
	Ego Achievement	6.08	2.18	6.02	2.90	0.18	n.s.	
	Emotionality-Placidity	3.43	1.72	3.64	1.99	0.88	n.s.	
	Energy-Passivity	7.30	1.51	7.09	1.66	1.00	n.s.	
	Exhibitionism-Infavoidance	4.75	2.54	4.50	2.56	0.76	n.s.	
	Fantasied Achievement	5.99	1.85	3.64	2.52	8.16	<.001	-
	Impulsion-Deliberation	3.81	2.04	5.30	1.89	5.89	<.001	+
	Narcissism	5.60	1.88	4.01	2.37	5.70	<.001	-
	Play	4.44	1.82	5.38	2.41	3.38	<.001	+
	Pragmatism	6.65	1.83	6.15	2.42	1.88	n.s.	
	Risk-Harmavoidance	5.03	2.19	5.55	2.32	1.77	n.s.	
	Sentience	4.23	1.80	4.82	1.90	2.44	<.05	+
	Sex-Prudishness	4.87	2.17	4.08	2.46	2.63	<.01	-

*Significant increases in the Senior year are indicated by a plus (+) sign, loses by a minus (-).

of intellectual interests, a consistent decline in various manifestations of dependency and selective shifts in impulse controls. A growing self-assurance appears to be reflected in such things as an increased readiness to express aggression and dominance, as well as in an acceptance of impulses towards play and sentience. The trend suggested by these data is all the more interesting for its contrast with the more egocentric impulsiveness of the 34 seniors from the class preceding these two who contributed the data seen previously in Tables 1 and 2.

Differences in College Environments

It seems likely that the changes being observed here are to some degree the result of purposive activities on the part of the faculty and administration of this school, although we have not as yet made any attempt to measure medical school environments in these terms. The extent of differences to be found between school environments, however, is suggested by Figure 2, which contrasts press scale scores obtained from students in three business administration programs with scores from students in seven elite liberal arts colleges. These profiles are based on stanine scores standardized on a sample of 32 selected colleges and technical programs; any departure from a perfect circle, therefore, indicates a deviation from the norm. It is reasonably clear that the business administration and liberal arts environments differ from other types of college programs as well as from one another.

The business administration programs appear here as markedly higher in maintaining student dependency needs, particularly with respect to press for abasement, deference, and order. Examples of items in these areas in which the business administration programs exceeded liberal arts by over forty percentage points may be found in Table 4. The liberal arts colleges, on the other hand, encourage student intellectual development at a manifestly higher level, as can be seen by the remaining items in Table 4.

Although the elite liberal arts colleges are very much alike in the stress placed on intellectual activities, this characteristic is not unique to them. What is unique among these schools is the extent to which personal independence and informality is encouraged, in two cases to the point of seemingly institutionalized rebellion. The emphasis upon these qualities is peculiar to those schools and shared with no other type of institution among the 66 thus far studied. Among themselves the liberal arts colleges in the present sample appear to be further differentiated by the specific area of intellectual activity emphasized. Three have been noted thus far: art (with variants involving appreciation or creation), science, and public service. The characteristics noted for these schools are probably typical of the colleges identified by Knapp, Goodrich, and Greenbaum (1952, 1953) for their high contribution of future scholars and scientists, as has already been confirmed for a number of them restudied from the present frame of reference by Thistlethwaite (1959a, 1959b).

Figure 2

Stanine score press profiles obtained from 460 students at seven liberal arts colleges and 156 students in three business administration programs.

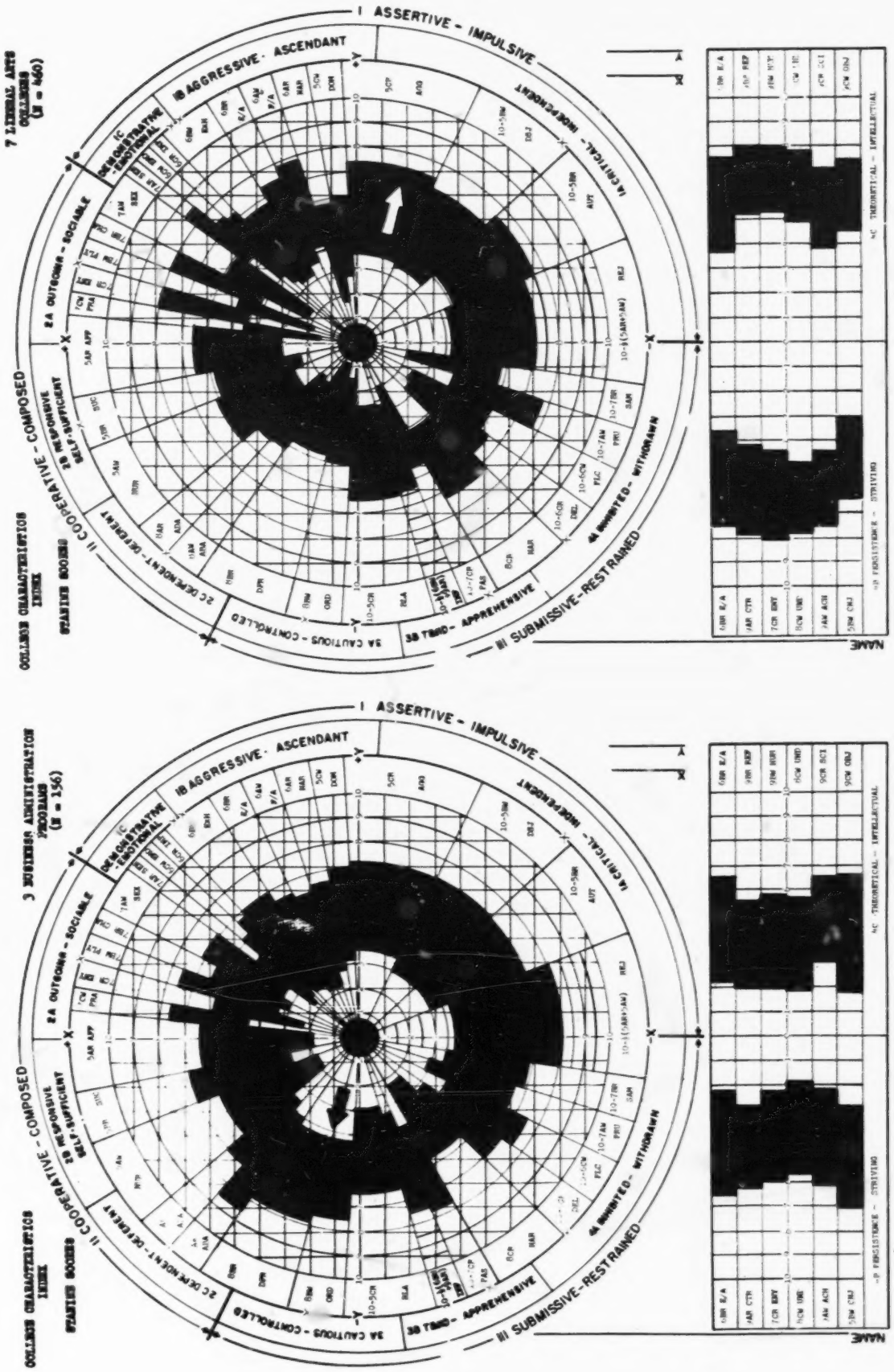

7 LIBERAL ARTS COLLEGES (N = 460)
1 ASSERTIVE - IMPULSIVE
1B AGGRESSIVE - ASCENDANT
1C DEMONSTRATIVE - EMOTIONAL
1A CRITICAL - INDEPENDENT
2A OUTGOING - SOCIABLE
2B RESPONSIVE SELF-SUFFICIENT
2C DEPENDENT - DEFERENT
II COOPERATIVE - COMPOSED
3A CAUTIOUS - CONTROLLED
3B TIMID - APPREHENSIVE
III SUBMISSIVE - RESTRAINED
4A INHIBITED - WITHDRAWN
NC THEORETICAL - INTELLECTUAL
-P PERSISTENCE - STRIVING
NAME
3 BUSINESS ADMINISTRATION PROGRAMS (N = 156)

Table 4

College Characteristics Index Items Differentiating Between Liberal Arts and Business Administration Programs By Forty Percentage Points or More.

No.	Item	Scale	Per Cent Response	
			Lib.Arts	Bus.Admin.
1.	Students are discouraged from criticizing administrative policies and teaching practices	Abasement	20.2	92.0
2.	The school administration has little tolerance for student complaints and protests	Abasement	14.1	56.0
9.	Students address faculty members as "professor" or "doctor"	Deference	13.5	63.3
69.	Religious worship here stresses service to God and obedience to His laws	Deference	18.5	64.4
22.	In many classes students have an assigned seat	Order	12.9	99.3
142.	Professors usually take attendance in class	Order	32.2	83.0
292.	Classes meet only at their regularly scheduled time and place	Order	34.7	90.3
47.	The school offers many opportunities for students to understand and criticize important works in art, music, and drama	Humanism	85.1	40.8
77.	A lecture by an outstanding literary critic would be well attended	Humanism	90.4	34.3
107.	Many students are planning post-graduate work in the social sciences	Humanism	76.2	18.8
167.	When students get together, they often talk about trends in art, music, or the theatre	Humanism	75.3	17.9
197.	Humanities courses are often elected by students majoring in other areas	Humanism	89.9	49.1
26[illegible].	The school has an excellent reputation for academic freedom	Objectivity	90.6	48.6

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Table 4 (cont.)

College Characteristics Index Items Differentiating Between Liberal Arts and Business Administration Programs by Forty Percentage Points or More.

No.	Item	Scale	Per Cent Response	
			Lib.Arts	Bus.Admin.
25.	Books dealing with psychological problems or personal values are widely read and discussed	Reflectiveness	55.2	13.8
55.	There would be a capacity audience for a lecture by an outstanding philosopher or theologian	Reflectiveness	76.2	18.1
115.	Modern art and music get considerable attention here	Reflectiveness	89.6	41.3
235.	Long, serious intellectual discussions are common among the students	Reflectiveness	84.6	21.6
295.	There is considerable interest in the analysis of value systems and the relativity of societies and ethics	Reflectiveness	86.9	38.3
30.	There is a lot of emphasis on preparing for graduate work	Understanding	62.4	10.4
90.	Most students have considerable interest in round tables, panel meetings, or other formal discussions	Understanding	74.7	34.2
180.	Many students here prefer to talk about poetry, philosophy, or mathematics, as compared with motion pictures, politics, or inventions	Understanding	78.6	26.5

The encouragement of student autonomy to be found in the liberal arts college is in direct opposition to the majority of schools studied thus far, almost 60 per cent of which have scores which reflect a strong emphasis on constraint and conformity, as in the case of the business administration programs referred to previously. A few of the remaining institutions have been identified as reflections of the Fitzgerald tradition in the American college scene--the fountains of knowledge where students gather to drink--and there is no doubt that other patterns in addition to those described in analyses by Stern (1960, in press) and by Pace (1960) will be identified as the range of institutions is extended, and our skill in interpreting these new forms of data increases.

The characteristics of the student bodies in any of the schools examined thus far reflect needs patterns which are readily recognizable as personalized versions of the prevailing press. This is not attributable to the fact that the same students are in general the sources of both sets of data, for there is no relationship between the needs preferences a student records for himself and the press characteristics he attributes to the college, either for samples of students at the same institution (McFee, 1959) or across institutions (Dorn, in preparation). The diagonal entries in Table 5, however, representing the correlations between average need and average press scores at 43 institutions, indicate that there is a significant tendency for students with particular needs to be found at institutions with appropriate press. Although there is considerable variation in the degree of this relationship, ranging from -26 to +79, the average correlation between student body need and corresponding institutional press is in the +30's.

There are many relationships in this table of considerable interest, showing as it does the kinds of academic environments in which each particular student characteristic is maximized (reading across the rows) and the kinds of students to be found in any given environment (reading down the columns). To illustrate, let us consider needs for achievement and sex, Scylla and Charybdis for the Student Personnel Dean. The diagonal entries in both cases are approximately zero, indicating that students with strongly expressed interests in achievement or in sex are not especially likely to be found in colleges at which either of these activities are stressed. Reading across the rows also reveals generally zero-order relationships, which may be interpreted to mean that such students are equally likely to be found in any college environment. So far there is no occasion for surprise. However, reading down the columns, we find that institutions which stress academic achievement are most likely to house students with needs for philosophical reflectiveness and scientific pursuits, least likely to contain students interested in affiliation, dominance and play. Schools at which heterosexual activities are pronounced, however, are most likely to attract and hold students who are play-oriented, aggressive, domineering, and have fantasies of unrealistic achievement. Or perhaps these are the only students who can survive in such an atmosphere.

Table 5

Matrix of Intercorrelations Between Activities Index and College Characteristics Index Means at 43 Colleges

AI Means*	CCI Means														
	Aba	Ach	Ada	Aff	Agg	Cha	Cnj	Ctr	Dfr	Dom	E/A	Emo	Eny	Exh	F/A
Aba	-15	+22	+24	+48	-59	-34	+66	-08	+11	+07	+17	+32	+25	+11	-02
Ach	+07	+11	+25	-16	+24	+23	-18	+11	+02	+02	-02	-12	+03	+08	-09
Ada	-25	+20	+13	+21	-13	+12	+31	+26	-20	-09	+39	+18	+28	+30	+24
Aff	+49	-42	+60	+43	-40	-58	+28	-61	+71	+52	-26	-10	-48	-02	-54
Agg	+26	-21	-17	-60	+79	+52	-70	+28	-20	-06	-11	-48	-29	-17	+14
Cha	+08	-21	-39	-37	+63	+39	-62	+32	-38	-14	+04	+01	-04	-06	+17
Cnj	-19	+13	+52	+47	-59	-49	+65	-34	+37	+25	-09	+75	+12	+002	-28
Ctr	+18	-14	-13	-48	+39	+32	-41	+14	-04	-17	-06	-35	-11	-004	+12
Dfr	-13	+14	+36	+53	+78	-40	+68	-31	+39	+19	+14	+26	+14	+23	-11
Dom	+45	-38	-01	-52	+54	+32	-61	-07	+17	+14	-18	-55	-51	-05	-13
E/A	+06	+01	-002	-01	+02	-08	+10	+03	-03	+14	-02	-09	-07	+02	-04
Emo	-30	+05	-44	+10	+07	+01	-04	+28	-49	-12	+18	+52	+33	-01	+23
Eny	-14	-05	-14	-21	+16	+31	-21	-06	-02	-24	+11	-08	-02	+15	-02
Exh	+22	-20	-18	-36	+50	+08	-40	+12	-12	-01	-27	-11	-15	-26	-12
F/A	+46	-25	+20	-53	+55	+28	-43	+07	+22	+15	-24	-60	-45	-16	-12
Har	+02	-01	+33	+52	-57	-48	+45	-27	+24	+38	+10	+35	+03	+08	-21
Hum	-29	+25	-19	+21	-10	-07	+18	+19	-40	-03	+21	+46	+33	+10	+10
Imp	-17	+01	-59	-30	+47	+37	-46	+45	-62	-33	+15	+25	+22	-08	+25
Nar	+07	+04	+19	+29	-25	-26	+37	-04	+16	+32	+09	+37	+11	+17	-07
Nur	-16	+04	-13	+62	-54	-50	+53	-24	+14	+26	+16	+52	+12	+17	-22
Obj	-06	+03	-03	+05	-19	+09	+01	-26	+12	-12	+08	-14	-05	+13	-01
Ord	+36	-01	+48	+47	-58	-47	+62	-37	+40	+26	+002	+13	-06	-003	-33
Ply	+47	-48	+09	-10	+16	-04	-30	-32	+35	+22	-18	-31	-51	-08	-26
Pra	+32	-17	+61	+20	-18	-12	+16	-29	+46	+31	-01	-25	-32	+16	-29
Ref	-29	+30	-08	+05	-06	+22	+07	+20	-24	-01	+38	+23	+29	+23	+30
Sci	-10	+34	+05	-39	+28	+46	-21	+42	-19	-22	+10	-31	+16	-002	+30
Sen	-22	+16	-31	-03	+11	+22	-14	+36	-36	-06	+32	+35	+29	+19	+34
Sex	-29	-08	+02	+18	-23	-12	+16	-01	+01	+23	+14	+31	+07	+02	+08
Suc	-005	-10	+36	+54	-59	-45	+57	-43	+38	+32	+02	+23	-07	+13	-10
Und	-23	+28	-16	-33	+41	+53	-28	+43	-39	-17	+21	-01	+25	+17	+34

*See Table 1 for terms of which these are abbreviations.

Table 5 (cont.)

Matrix of Intercorrelations Between Activities Index and College Characteristics Index Means at 43 Colleges

AI Means*	CCI Means														
	Har	Hum	Imp	Nar	Nur	Obj	Ord	Ply	Pra	Ref	Sci	Sen	Sex	Suc	Und
Aba	+65	+22	-39	+37	+62	-36	+39	-05	-02	+25	-11	-06	-48	+36	+41
Ach	-37	-14	+19	-10	-22	-18	-14	+22	+18	-11	+07	-18	+09	-09	+04
Ada	+21	+13	+03	-002	+19	+25	-009	+03	-08	+42	+16	+30	-08	+02	+31
Aff	+10	-47	-38	+55	+52	-38	+71	+47	+53	-46	-30	-55	+15	+56	-48
Agg	-75	-09	+48	-47	-71	-48	-35	+05	-002	-14	+41	+05	+50	-67	-35
Cha	-35	+17	+37	-48	-51	-14	-41	-17	-34	+08	+16	+31	+32	-38	-20
Cnj	+56	-22	-42	+51	+60	+10	+53	+21	+36	-15	-25	-38	-35	+47	+18
Ctr	-40	-005	+25	-38	-48	-31	+004	+06	+13	-06	+35	+15	+36	-35	-22
Dfr	+63	+08	-47	+60	+71	+33	+51	+14	+22	+14	-20	-11	-43	+56	+31
Dom	-61	-20	+32	-21	-51	-62	-06	+26	+22	-31	+25	-15	+53	-42	-52
E/A	+24	+22	-04	+12	+12	-002	+12	+05	-15	+02	-02	+10	+02	-12	+10
Emo	+30	+40	+02	-16	+06	+38	-28	-42	-61	+26	-11	+45	-11	-03	+21
Eny	-16	+16	+09	-14	-31	-04	-13	+07	+01	+10	+14	+12	+14	-004	-06
Exh	-22	-08	+11	-29	-38	-31	-08	-04	-22	-24	-06	+02	+17	-31	-25
F/A	-64	-35	+24	-24	-54	-65	+05	+26	+41	-39	+28	-33	+43	-48	-48
Har	+64	+02	-35	+52	+69	+27	+27	+14	+04	+03	-46	-14	-29	+43	+19
Hum	+59	+56	-13	+07	+24	+41	-21	-28	-65	+41	-11	+46	-30	+04	+42
Imp	-11	+36	+28	-61	-45	+15	-55	-46	-60	+24	+13	+52	+04	-42	+04
Nar	+42	+18	-20	+32	+49	+18	+31	-01	-08	+10	-12	+03	-10	+32	+19
Nur	+74	+21	-36	+52	+77	+38	+34	+08	-19	+17	-49	+04	-35	+59	+30
Obj	-06	+14	-07	+14	+09	+02	+04	+08	-03	+13	+20	+11	+04	+14	+04
Ord	+50	-18	-42	+49	+61	+12	+54	+18	+39	-15	-32	-39	-34	+53	+14
Ply	-32	-24	+01	+04	-13	-45	+16	+23	+22	-32	+06	-22	+39	-02	-59
Pra	-22	-38	-03	+27	+20	-34	+46	+48	+71	-28	+12	-40	+22	+23	-24
Ref	+27	+59	+14	+17	+19	+34	-22	-06	-44	+55	+19	+45	-14	-08	+52
Sci	-41	+04	+18	-37	-48	-14	-26	-10	+11	+10	+61	+12	+09	-51	+11
Sen	+09	+53	+17	-09	+001	+31	-28	-27	-57	+40	+16	+49	+04	-14	+33
Sex	+26	+14	-21	+19	+31	+09	+18	-11	-28	+07	-24	+12	+02	+13	+03
Suc	+45	+01	-41	+63	+69	+13	+60	+21	+20	+01	-20	-12	-15	+55	+07
Und	-26	+35	+35	-30	-43	+01	-46	-08	-22	+33	+44	+36	+10	-46	+23

*See Table 1 for terms of which these are abbreviations.

The emphasis thus far has been on cultural homogeneity, but it is important to note that this, too, is one of the peculiar attributes of the small liberal arts college. No other type of school offers so sharp an image to its students, or preserves so great a built-in strain between the level of excellence implied in that image and the corresponding characteristics of their student bodies. Some indication of the extent of subcultural differences within a large, complex university setting is given in Table 6 which reveals the contrasting images which such a school offers to men as compared with women students. It would appear that women generally find this school to be a more stimulating environment than do the men.

Tables 7 and 8 summarize differences in the image various majors have of this same school. Reference to Table 7 suggests that for three of these 16 groups of seniors, there are fairly detailed and different impressions of this institution. Business administration majors apparently consider the school to be weak, whereas education and forestry majors both find the school intellectually challenging, although for different reasons. With respect to impulse expression, however, the education students find this to be a most provocative place, in marked contrast to the restraints experienced by the foresters.

These differences are at least partially attributable to a divergence in the expectations, attributes, and prior experiences of these students. As Tables 9 and 10 indicate, each of these several groups of majors have their own distinctive patterns of needs. The exclusively male foresters are purposeful students strongly oriented towards the sciences who reject playfulness and related aspects of adolescent social life. The education majors, on the other hand, express strong interests in the humanities as well as in boy-girl relationships, perhaps because the sample is heavily weighted with women. At any rate, the home economics women are similarly oriented, whereas the business administration men are interested in play rather than in heterosexual activities per se.

It would appear then that the differences in institutional atmosphere reported by these various groups of seniors is related in part to their expressed needs. Forestry students and education majors each describe an institution which fulfills their needs, as different as these two groups are, whereas the students in business administration may be expected to find a lesser measure of satisfaction with their experience here. At the present stage of these investigations it remains a moot point as to whether there are in fact three different institutions corresponding to the descriptions of each of these subcultural minorities in the same complex university setting, or whether their descriptions more nearly reflect personalized variations of the same underlying theme. To what extent do institutional press mold students in accord with faculty objectives; to what extent do student needs determine the prevailing atmosphere? Whatever the answer, it is clear that for these students this is the way the institution makes itself felt.

Table 6

College Characteristics Index Stanine Means
for Senior Men (N=573) and Women (N=463)
at the Same Institution

Dimension	Need Scales	Men $\bar{X}$	Men σ	Women $\bar{X}$	Women σ	$t^{1,2}$	Total $\bar{X}$	Total σ
Intellectual Needs	Achievement	3.35	2.64	3.41	2.45	.38	3.38	2.55
	Conjunctivity-Disjunctivity	4.21	2.45	4.10	2.32	.73	4.16	2.40
	Counteraction-Infavoidance	4.12	1.85	3.79	1.78	+2.75**	3.96	1.84
	Ego Achievement	5.82	2.05	6.23	1.85	-3.42**	6.00	1.99
	Energy-Passivity	4.10	2.00	4.01	2.18	.64	4.07	2.17
	Humanism	4.84	2.13	5.19	2.02	-2.69**	4.99	2.11
	Objectivity	3.95	2.32	3.93	2.13	.14	3.94	2.24
	Reflectiveness	5.17	2.19	5.43	2.18	1.86	5.29	2.18
	Scientism	4.63	2.41	4.12	2.25	+3.40**	4.40	2.37
	Understanding	4.22	2.25	4.01	2.22	1.50	4.12	2.26
Dependency Needs	Abasement	7.03	2.12	7.37	1.93	-2.62**	7.17	2.06
	Adaptiveness	6.05	1.67	5.76	1.74	+2.64**	5.92	1.71
	Affiliation-Rejection	4.59	1.92	4.63	1.83	.33	4.60	1.89
	Blameavoidance-Aggression	3.75	2.12	3.77	2.14	.14	3.77	2.14
	Conjunctivity-Disjunctivity	4.21	2.45	4.10	2.32	.73	4.16	2.40
	Deference	5.50	1.60	5.50	1.54	--	5.50	1.57
	Nurturance-Rejection	5.25	2.10	5.91	1.82	-5.08**	5.55	2.02
	Order	4.15	1.64	4.31	1.56	1.57	4.21	1.63
	Succorance-Autonomy	4.58	1.66	4.71	1.52	1.30	4.64	1.59

[1]Significant larger values for senior men are indicated by a plus (+) sign, lower by a minus (-).
[2]$p < .05$ (*), $< .01$ (**).

Table 6 (Cont.)

College Characteristics Index Stanine Means
for Senior Men (N=573) and Women (N=463)
at the Same Institution

Dimension	Need Scales	Men		Women			Total	
		$\bar{X}$	σ	$\bar{X}$	σ	$t^{1,2}$	$\bar{X}$	σ
Impulse Expression	Aggression-Blameavoidance	6.25	2.12	6.23	2.14	.14	6.23	2.14
	Change-Sameness	5.46	1.56	5.56	1.51	1.00	5.50	1.53
	Dominance	6.19	1.88	6.67	1.85	-4.00**	6.41	1.87
	Ego Achievement	5.82	2.05	6.23	1.86	-3.42**	6.00	1.99
	Emotionality-Placidity	4.33	1.88	4.91	1.84	-4.83**	4.59	1.88
	Energy-Passivity	4.10	2.19	4.01	2.18	.64	4.07	2.17
	Exhibitionism-Infavoidance	5.34	2.11	5.52	1.99	1.38	5.42	2.06
	Fantasied Achievement	4.99	1.56	4.69	1.44	+3.00**	4.86	1.50
	Impulsion-Deliberation	6.05	1.72	6.43	1.56	-3.80**	6.21	1.68
	Narcissism	5.26	1.96	5.90	1.95	-5.33**	5.55	1.99
	Play	6.86	1.75	7.16	1.46	-3.00**	7.00	1.61
	Pragmatism	6.06	1.57	6.07	1.61	.10	6.07	1.56
	Risk-Harmavoidance	6.49	1.42	6.34	1.39	1.67	6.42	1.41
	Sentience	4.87	1.82	5.46	1.98	-4.92**	5.14	1.93
	Sex-Prudishness	7.51	1.75	7.19	1.39	+3.20**	7.05	1.60

[1]Significant larger values for senior men are indicated by a plus (+) sign, lower by a minus (-).

[2]$p<.05$ (*), $<.01$ (**).

Table 7
College Characteristics Index
Stanine Means- Total Senior Class of University-affiliated College (N=1036)

	Aba	Ach	Ada	Aff	Agg	Cha	Cnj	Ctr	Dfr	Dom
L.A. Classics & Humanities	7.35	3.19	5.59	4.28	6.28	5.42	4.30	3.90	5.76	6.29
L.A. Social Sciences	7.78	-2.39	-5.19	4.32	6.54	5.59	4.24	3.39	5.68	6.07
L.A. Natural Sciences	7.18	3.71	5.59	4.82	6.37	5.37	4.38	3.59	5.40	6.14
L.A. Hist. Econ. & Gov't.	7.27	3.32	5.90	4.45	6.15	5.16	4.29	3.63	5.75	6.36
L.A. Biol. Sciences	7.84	3.07	6.16	3.81	6.48	5.34	4.34	3.81	5.90	6.49
L.A. Miscellaneous	7.50	3.10	5.73	4.29	6.52	5.27	3.69	3.66	5.64	6.41
Bus. Administration	7.43	-2.67	5.96	4.08	6.50	5.26	3.88	3.58	+5.93	6.36
Fine Arts	7.27	3.53	6.34	4.99	6.02	5.73	4.08	4.28	5.10	6.39
Education	7.27	3.74	5.99	4.92	6.13	+5.83	4.41	4.27	5.33	6.80
Speech & Dramatic Arts	8.25	-2.45	6.03	4.30	6.65	5.43	3.82	3.35	5.74	7.43
Home Economics	7.52	3.85	5.85	4.80	6.07	5.21	4.08	4.02	5.61	7.05
Architecture	7.42	3.23	+6.94	4.23	6.86	5.16	3.55	4.15	4.88	7.01
Engineering	6.84	3.42	5.93	4.43	5.86	5.65	3.32	4.11	5.84	-5.79
Forestry	-5.69	3.97	6.10	+5.53	5.77	5.65	4.12	+4.81	-4.90	-5.51
Journalism	-5.57	3.95	5.68	4.53	+7.22	5.46	3.66	3.66	5.31	7.00
Nursing	6.54	4.56	6.34	4.64	5.51	5.72	5.04	4.38	4.87	6.54
TOTAL	7.17	3.38	5.92	4.60	6.23	5.50	4.16	3.96	5.50	6.41
	E/A	Emo	Eny	Exh	F/A	Har	Hum	Imp	Nar	Nur
L.A. Classics & Humanities	6.06	4.64	3.97	5.73	4.84	3.51	4.98	6.18	5.87	5.43
L.A. Social Sciences	5.92	4.38	3.58	5.41	4.75	3.44	5.11	6.60	5.50	5.42
L.A. Natural Sciences	5.83	4.41	3.93	5.30	4.61	3.49	4.78	5.92	4.96	5.35
L.A. Hist. Econ. & Gov't.	5.95	4.31	4.18	5.41	4.90	3.45	5.20	6.24	5.58	5.32
L.A. Biol. Sciences	6.09	4.38	3.55	5.61	4.56	3.51	4.67	5.62	5.07	5.28
L.A. Miscellaneous	5.81	4.44	3.57	5.39	4.91	3.56	4.88	5.80	5.57	5.38
Bus. Administration	5.76	4.07	-3.41	4.99	4.48	3.31	-4.41	6.25	5.24	4.99
Fine Arts	6.10	4.75	4.48	5.53	5.17	3.72	5.07	6.16	5.80	5.80
Education	+6.63	+5.18	4.38	+5.91	4.95	3.72	5.51	+6.64	+6.09	+6.26
Speech & Dramatic Arts	6.15	4.66	3.64	5.21	5.28	3.27	4.66	6.49	6.05	4.95
Home Economics	6.64	5.08	4.51	5.63	4.88	3.59	5.85	6.84	5.95	6.16
Architecture	5.23	4.50	4.35	5.20	5.07	3.76	5.24	6.30	4.83	5.16
Engineering	5.53	4.23	4.14	5.02	4.82	3.61	4.93	-5.49	5.12	5.19
Forestry	5.33	4.22	4.36	-4.63	4.92	3.65	-4.10	-5.60	-4.77	5.16
Journalism	5.69	4.57	3.43	5.45	4.46	3.58	4.17	6.45	4.91	5.43
Nursing	6.05	5.29	5.18	5.45	5.32	4.25	5.49	6.64	6.34	6.47
TOTAL	6.00	4.59	4.07	5.42	4.86	3.58	4.99	6.21	5.55	5.55

+ and - signs indicate means differing between groups of majors enough to be estimated as statistically significant in the region of the .01 level or beyond.

Table 7 (cont.)
College Characteristics Index
Stanine Means- Total Senior Class of University-affiliated College (N=1036)

	Obj	Ord	Ply	Pra	Ref	Sci	Sen	Sex	Suc	Und
L.A. Classics & Humanities	3.72	3.89	6.94	5.65	5.19	4.07	5.20	7.13	4.48	4.15
L.A. Social Sciences	3.83	4.51	7.27	-5.54	5.26	4.07	4.99	+7.60	4.85	3.86
L.A. Natural Sciences	3.94	3.77	7.09	6.00	4.85	4.34	5.02	7.10	4.94	4.07
L.A. Hist. Econ. & Gov't.	3.74	4.04	7.10	6.05	4.98	4.19	-4.66	7.15	4.50	4.24
L.A. Biol. Sciences	3.93	4.73	6.98	6.21	5.65	4.33	4.79	7.06	3.99	3.78
L.A. Miscellaneous	3.31	4.08	6.86	6.26	5.15	4.11	-4.67	7.05	4.15	3.81
Bus. Administration	3.53	4.09	7.17	6.25	4.85	3.76	-4.53	7.32	4.58	-3.39
Fine Arts	4.14	4.36	7.13	6.13	5.52	4.17	5.62	7.00	4.77	4.29
Education	+4.26	4.54	7.34	+6.31	+5.89	4.75	+5.66	7.36	4.67	4.44
Speech & Dramatic Arts	2.88	4.24	7.60	6.53	4.64	3.66	4.77	7.59	4.57	3.64
Home Economics	3.97	4.84	6.68	6.38	5.85	4.81	+5.87	7.05	4.91	4.56
Architecture	3.40	3.95	6.74	6.34	5.00	4.42	5.29	6.91	4.56	3.57
Engineering	4.28	-3.66	-6.35	5.84	5.23	4.78	4.98	-6.62	4.86	4.27
Forestry	+4.60	4.22	-6.08	5.60	4.77	+5.62	4.93	-5.74	4.84	4.47
Journalism	3.93	3.47	7.25	6.37	4.97	-2.89	5.46	7.15	4.75	3.57
Nursing	4.63	4.83	6.79	6.12	6.07	4.84	5.76	6.33	4.47	4.68
TOTAL	3.94	4.21	7.00	6.07	5.29	4.40	5.14	7.05	4.64	4.12

+ and - signs indicate means differing between groups of majors enough to be estimated as statistically significant in the region of the .01 level or beyond.

Table 8

Summary of College Characteristics Index Scales Contributing to Differentiation Between Seniors in Sixteen Different Majors at the Same Institution*

Major	N	Intellectual Needs	Dependency Needs	Impulse Expression
L.A. Classics, Humanities	77			
L.A. Social Sciences	65	Ach-	Ada-	Pra- Sex-
L.A. Natural Sciences	42			
L.A. Hist., Econ., Gov't.	110			Sen-
L.A. Biological Science	32			
L.A. Miscellaneous	66			Sen-
Business Administration	88	Ach- Eny- Hum- Und-	Dfr+	Sen-
Fine Arts	71			

*Plus (+) signs following scale name indicate means significantly high at .01 level or beyond, minus (-) signs indicate significantly low means.

Table 8 (cont.)

Summary of College Characteristics Index Scales Contributing to Differentiation Between Seniors in Sixteen Different Majors at the Same Institution*

Major	N	Intellectual Needs	Dependency Needs	Impulse Expression
Education	211	E/A+ Obj+ Ref+	Nur+	Cha+ E/a+ Emo+ Exh+ Imp+ Nar+ Pra+ Sen+
Speech, Dramatic Arts	25	Ach-		
Home Economics	34			Sen+
Architecture	28		Ada+	
Engineering	64		Ord-	Dom- Imp- Ply- Sex-
Forestry	84	Ctr+ Hum- Obj+ Sci+	Aba- Aff+ Dfr-	Dom- Exh- Imp- Nar- Ply- Sex-
Journalism	24	Sci-	Aba- Bla-	Agg+
Nursing	15			

*Plus (+) signs following scale name indicate means significantly high at .01 level or beyond, minus (-) signs indicate significantly low means.

Table 9
Stern Activities Index
Stanine Means- Total Senior Class of University-affiliated College (N=1036)

	Aba	Ach	Ada	Aff	Agg	Cha	Cnj	Ctr	Dfr	Dom
L.A. Miscellaneous	4.59	5.08	4.88	5.75	5.99	5.89	4.71	5.14	4.55	5.80
L.A. Classics and Humanities	4.88	5.01	4.85	5.04	5.05	5.74	4.45	5.00	5.01	5.19
L.A. Hist. Econ. & Gov't.	4.75	5.55	4.86	5.64	+6.41	5.46	4.61	5.52	4.29	+6.43
L.A. Natural Sciences	4.58	5.70	4.95	-4.29	4.76	-4.38	5.25	6.00	4.66	-4.68
L.A. Biol. Sciences	5.00	5.28	5.00	5.33	5.75	4.85	5.31	5.28	4.63	6.08
L.A. Social Sciences	4.64	4.72	4.84	5.80	5.40	5.39	4.52	4.72	4.51	5.59
Bus. Administration	4.50	5.08	4.54	6.00	5.44	5.32	4.51	5.35	4.78	5.98
Fine Arts	4.86	+5.77	5.43	5.20	5.09	5.99	4.72	5.60	5.11	5.05
Forestry	5.16	5.12	5.36	-4.39	+5.98	5.67	4.92	5.40	4.58	5.70
Architecture	4.74	5.94	5.32	5.35	6.21	5.90	4.68	5.37	5.12	5.82
Education	5.18	4.94	5.22	+6.01	-4.83	5.32	+5.36	5.28	+5.47	5.38
Engineering	4.61	5.45	4.72	5.14	5.81	5.23	5.05	5.32	4.84	5.66
Journalism	4.62	5.97	5.45	5.56	5.13	5.71	4.92	5.54	4.54	5.50
Speech & Dramatic Arts	4.25	5.28	4.94	5.40	5.43	5.95	4.69	5.32	4.53	5.48
Nursing	5.52	5.39	5.80	6.14	-3.87	4.91	5.75	5.73	+6.40	4.67
Home Economics	4.77	4.60	4.75	+6.35	-4.33	5.57	4.53	4.72	5.40	5.11
TOTAL	4.84	5.21	5.02	5.50	5.40	4.63	4.87	5.28	4.89	5.58

	E/A	Emo	Eny	Exh	F/A	Har	Hum	Imp	Nar	Nur
L.A. Miscellaneous	5.62	4.94	5.09	5.70	5.78	4.20	5.38	5.41	5.08	4.86
L.A. Classics and Humanities	5.44	+5.59	-4.54	5.36	5.39	5.09	4.87	+5.74	5.53	5.13
L.A. Hist. Econ. & Gov't.	+6.10	5.13	5.54	6.19	+6.65	4.12	5.25	5.30	5.24	4.69
L.A. Natural Sciences	4.43	-4.42	5.77	4.50	4.85	4.90	4.48	4.54	4.73	4.40
L.A. Biol. Sciences	5.50	4.88	5.38	5.51	+6.44	3.97	5.32	4.50	5.55	5.19
L.A. Social Sciences	5.30	+5.67	5.09	5.32	-4.81	4.77	5.30	5.29	4.89	4.98
Bus. Administration	5.32	-4.57	5.16	5.56	+6.12	-3.27	4.38	5.03	4.82	4.40
Fine Arts	-4.35	+5.59	5.58	5.59	-4.94	4.61	5.46	5.35	5.50	5.10
Forestry	5.14	-4.06	5.82	4.89	5.65	-3.89	4.44	4.70	-4.54	-4.18
Architecture	5.44	4.82	5.63	5.47	5.60	3.90	4.95	5.55	4.76	4.43
Education	5.22	+6.00	5.42	5.73	-4.71	+5.14	+5.88	5.34	5.65	+5.88
Engineering	4.86	-4.18	5.39	4.94	+6.40	4.65	-4.04	4.77	4.97	4.25
Journalism	6.06	5.28	5.59	5.55	4.59	5.47	5.93	5.38	4.87	5.21
Speech & Dramatic Arts	5.51	6.14	5.02	+7.78	6.34	5.19	5.18	+6.35	+6.64	5.42
Nursing	4.60	5.82	5.81	4.37	-4.17	5.46	5.14	4.76	5.52	+7.08
Home Economics	4.81	5.98	4.65	5.69	-4.19	+5.62	5.05	5.63	+6.39	5.66
TOTAL	5.26	5.25	5.34	5.54	5.45	4.57	5.13	5.22	5.26	5.02

+ and - signs indicate means differing between groups of majors enough to be estimated as statistically significant in the region of the .01 level or beyond.

Table 9 (Cont.)
Stern Activities Index
Stanine Means- Total Senior Class of University-affiliated College (N=1036)

	Obj	Ord	Ply	Pra	Ref	Sci	Sen	Sex	Suc	Und
L.A. Miscellaneous	4.94	4.47	5.79	4.96	4.97	4.75	4.54	4.43	4.50	5.19
L.A. Classics & Humanities	4.62	5.14	5.51	4.92	5.33	4.74	5.39	4.94	5.19	5.26
L.A. Hist. Econ. & Gov't.	4.73	5.07	5.79	5.10	4.71	4.55	5.01	4.74	4.93	4.87
L.A. Natural Sciences	5.50	5.30	4.92	5.17	5.55	+6.42	4.77	4.81	4.95	+5.99
L.A. Biol. Sciences	5.15	5.06	5.13	6.14	5.75	+6.73	5.27	4.94	5.25	5.85
L.A. Social Sciences	5.32	4.65	5.98	4.76	5.24	4.53	5.40	5.28	5.28	4.86
Bus. Administration	5.34	5.12	+6.19	5.64	-4.05	4.37	4.61	4.92	5.08	-4.19
Fine Arts	5.10	4.88	4.98	5.12	+5.82	4.70	5.15	4.88	4.93	4.77
Forestry	5.27	4.69	-4.81	5.75	4.58	+5.77	4.59	4.32	-4.25	4.73
Architecture	5.14	4.84	5.62	5.62	5.37	5.01	5.29	4.42	4.57	4.95
Education	4.92	+5.60	5.25	5.13	5.54	4.67	+5.54	+6.04	-4.12	5.04
Engineering	4.83	5.18	5.35	+6.18	4.69	+6.52	4.78	4.42	5.02	5.40
Journalism	5.20	5.15	4.55	4.44	5.12	-3.34	5.40	5.35	4.37	5.08
Speech & Dramatic Arts	-3.96	5.05	5.80	4.83	4.68	3.48	+6.08	5.59	4.92	-3.79
Nursing	4.83	5.75	4.58	5.22	5.69	4.46	5.28	5.51	5.94	5.39
Home Economics	4.44	5.60	6.24	5.46	5.03	3.95	5.63	+6.18	5.46	-3.74
TOTAL	4.97	5.12	5.45	5.26	5.09	4.89	5.13	5.09	5.12	4.97

Table 10

Summary of Activities Index Scales Contributing to Differentiation
Between Seniors in Sixteen Different Majors at the Same Institution*

Major	N	Intellectual Needs	Dependency Needs	Impulse Expression
L.A. Classics, Humanities	77	Eny-		Emo+ Eny- Imp+ Risk+
L.A. Social Sciences	65			Emo+ F/A-
L.A. Natural Sciences	42	Sci+ Und+	Aff-	Cha- Dom- Emo-
L.A. Hist., Econ., Gov't.	110	E/A+	Bla-	Agg+ Dom+ E/A+ F/A+
L.A. Biological Sciences	32	Sci+		F/A+
L.A. Miscellaneous	66			
Business Administration	88	Ref- Und-		Emo- F/A+ Ply+ Risk+
Fine Arts	71	Ach+ E/A- Ref+		E/A- Emo+ F/A-

*Plus (+) signs following scale name indicate means significantly high at .01 level or beyond.
Minus (-) signs indicate significantly low means.

Table 10 (Cont.)

Summary of Activities Index Scales Contributing to Differentiation
Between Seniors in Sixteen Different Majors at the Same Institution*

Major	N	Intellectual Needs	Dependency Needs	Impulse Expression
Education	211	Cnj+ Hum+	Aff+ Bla+ Cnj+ Dfr+ Nur+ Suc+	Emo+ F/A- Risk- Sex+
Speech, Dramatic Arts	25	Und-		Exh+ Imp+ Nar+
Home Economics	3.	Und-	Aff+ Bla+	Agg- F/A- Nar+ Risk- Sex+
Architecture	28			
Engineering	64	Hum- Sci+		Emo- F/A+ Pra+
Forestry	84	Sci+	Aff- Bla- Nur- Suc-	Agg+ Emo- Nar- Fiy-
Journalism	24	Sci-		
Nursing	15		Bla+ Dfr+ Nur+	Agg- F/A-

*Plus (+) signs following scale name indicate means significantly high at .01 level or beyond. Minus (-) signs indicate significantly low means.

Implications

I have tried to convey something in this paper about the outlook of various college students today and the college environments in which they are to be found. To change the attitudes and values of students such as those described here would seem to require the reversal of an entire social trend. The liberal humanist shudders at such an intervention, and asks whether indoctrination in alternative value systems can be justified even if we knew how to achieve such changes in a four-year period given over to other purposes as well. All that I suspect we really want, however, is to find the way back to the sharing of common purposes in the classroom again, whatever these might be. This is half the problem, then: to identify student expectancies and purposes in terms which would permit us to restate and compare them with the current behavioral objectives of higher education. We need to know more about personal characteristics of students that are of significance for learning, and we need to know how to relate such characteristics to various kinds of academic experiences.

The excitement of ideas and discussion which I once found at Chicago as an undergraduate, I have re-discovered in some of my own classes today. But the challenge of abstractions, principles, and values in these current instances has been aroused not by intellectualism but by interpersonalism. Students today seem interested in interpersonal behavior, the analysis of motivation, and the problems of dealing effectively and with decency in human relations. Any material placed in this context arouses a depth and intensity of response which belies the apathy and privatism encountered elsewhere.

But there is another aspect to this problem. For many of the students in today's college classrooms, the ability to participate even under the circumstances just described seems severely limited by a deeply ingrained fear of introspection, self-expression, and departure from stereotyped views. Above all, they fear the consequences of personal freedom and seek security in dependence and conformity. Their values, in a socio-political sense, are perhaps less consistently conservative than considered heretofore. The predominant need is not so much for a new set of values, but for a new and different learning experience which provides them with the opportunity to discover the inadequacy of established expectancies and to explore new alternatives. These people are inaccessible to the most important aspects of the learning process in higher education, not as the result of inappropriate values but through the pernicious influence of techniques for relating to others which permit no more than a flight into anomic and selfless conformity. We know relatively little about these people, and much of what is known is a distortion derived from another historical era, but the issues involved seem of unusual significance for the future of our society as well as that of higher education."

Anatole France once wrote, "It is only by amusing oneself that we can learn...The whole art of teaching is only the art of awakening the natural curiosity of young minds for the purpose of satisfying it afterwards." But minds which are unable to amuse themselves are equally incapable of being bemused. They are like those minds which Oliver Wendell Holmes compared with the pupil of the eye--"the more light you pour on them, the more they contract."

The task of education in a democratic society includes the responsibility for opening closed minds, as well as attempting to fill empty ones. In the words of Kahlil Gibran, the Persian poet:

> No man can reveal to you aught but that which already lies half asleep in the dawning of your knowledge.
>
> The teacher who walks in the shadow of the temple among his followers, gives not of his wisdom but rather of his faith and his lovingness.
>
> If he is indeed wise he does not bid you enter the house of his wisdom, but rather leads you to the threshold of your own mind.